

URSCO NEWSLETTER

UNCG Undergraduate Research, Scholarship and Creativity Office | Spring 2023



INSIDE THIS ISSUE:

- 2023 Expo
 - Award winners
- Thomas Undergraduate Research Mentor Awards
- U-RISE Fellows
- Summer 2023 URCA Recipients

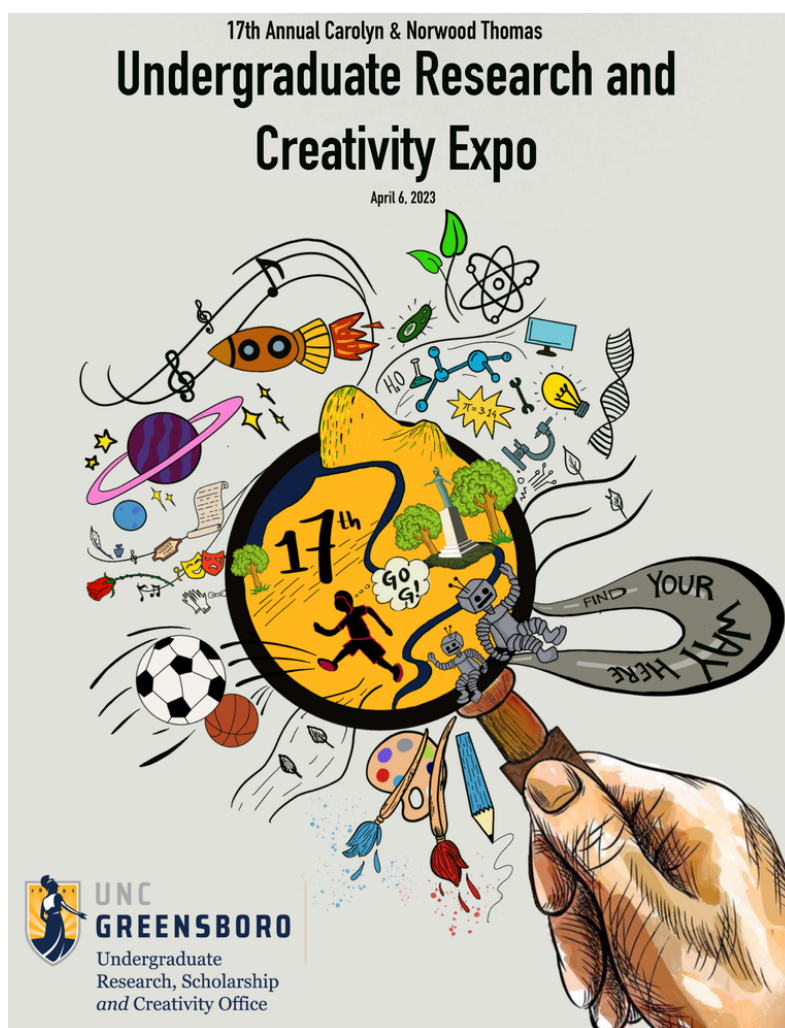


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Undergraduate
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17th Annual Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo

This year, the 17th Annual Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo was hosted in person at the EUC Ball room on April 6th, 2023 during. We were thrilled to host 160 presentations by more than 192 students, working with 91 mentors, and representing 27 academic departments/programs.



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2023 Carolyn & Norwood Thomas Undergraduate Research and Creativity Expo Award Winners

Business, Education, Social and Behavioral Sciences

1st Place:

Brendan Diaz (Psychology, Senior)

Mentor: Brittany Cassidy (Psychology)

An Attractiveness Halo on Perceived Friendliness is Stronger for Direct versus Averted Gaze Faces

2nd Place:

Kerry Cope (Consumer, Apparel, & Retail Studies, Senior)

Mentor: Jin Su (Consumer, Apparel, & Retail Studies)

Exploring the Role of Universal Design in Promoting Awareness of Sustainability

3rd Place:

Audrey Day (Psychology, Senior)

Mentor: Janet Boseovski (Psychology)

Effect of Parenting Status on Children's Perceptions of Women's Leadership in STEM Fields

Honorable Mention:

Cameron Sturgis (Psychology, Senior)

Mentor: Suzanne Vrshek-Schallhorn (Psychology)

Impacts of Discrimination Among College Students: A Mixed-Method Examination

Breanna Rogers (Psychology, Senior)

Mentor: Blair Wisco (Psychology)

The Sociocultural Context of Borderline Traits

Humanities

1st Place:

Theresa Cole (Classical Studies, Senior)

Mentor: Joanne Murphy (Classical Studies)

Regional Trade on the island

2nd Place:

Jessica Linn (Anthropology, Senior)

Mentor: Donna Nash (Anthropology)

The Intersection of Material Culture and Mortality: Assessing Ethnic and Social Differentiation in the Tombs of Yacacachi Cemetery, Peru

3rd Place:

Rebecca Kefer (Social Work, Senior)

Mentor: Heather Adams (English)

Communicating Wellness: Tacit Messages in Healthy Client Take-Home Literatures

Honorable Mention:

Haley Cline (History, Senior)

Mentor: James Anderson (History)

Building an Image: Restructuring the Identity and Femininity of Chinese Women from 1949-1976

Anna-Kristina Hoffman (Archaeology, Senior)

Mentor: Linda Stine (Archaeology)

Urban Renewal Project and Warnersville



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Mathematics, Life and Physical Sciences

1st Place:

Sarah Korb (Biochemistry, Senior)

Mentor: Kimberly Petersen (Chemistry)

Enantioselective Tandem Deprotection-Cyclization of Alcohols to Form Lactones

2nd Place:

Daniel Araya (Biology, Junior)

Mentor: Ayalew Osen (Biology)

Expression of *Pyrococcus furiosus* thioredoxin (PfrTx) in transgenic tobacco for enhanced abiotic stress tolerance

3rd Place (tie):

Kate Tirrell (Biology, Post-Bac) and Kristen Mitchell (Biology, Post-Bac)

Mentor: Amy Adamson (Biology)

Epstein-Barr Virus Replication Triggers Cancer Cells to Migrate.

Madison Gullett (Physics & Astronomy, Senior)

Mentor: Alicia Aarnio (Physics & Astronomy)

Understanding Magnetic Field Generation in Intermediate-Mass Young Stars

Honorable Mention:

Eric Whisnant (Biology, Post-Bac), Daniel Araya, Willy Piña, and Abdalkader Salaimeh

Mentor: Ayalew Osen (Biology)

Assessing natural variation in grain size in *tef* (*Eragrostis tef*) genotypes for genetic improvements

Karabuning Kupradit (Biology, Sophomore)

Mentor: Ramji Bhandari (Biology)

Inherited Toxicity: How the Legacy of Plastic Pollution Altered Future Generations' Susceptibility to Emerging Chemicals of Concern

Performing Arts

1st Place:

Amabel Prisk (Theatre, Senior)

Mentor: Janet Allard (Theatre)

Retelling the Life of Grace Sherwood: Exploring the Process of Playwriting

2nd Place:

Claire Haneberg (Music Education, Senior)

Mentor: Rebecca MacLeod (Music Education)

An Investigation of Composer Race, Ethnicity, and Gender Included in The Texas UIL List

3rd Place:

Jonah Carrel (Dance, Senior)

Mentor: Teresa Heiland (Dance)

Restaging Contemporary Dance on Male Bodies Using LMA and Motif Notation



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Visual Arts Exhibition

1st Place:

Zaire Miles-Moultrie (Marketing and Art, Senior)
Mentor: Jennifer Reis (Art)
The Lion, The Jackal, and The Man

2nd Place:

Laura Hernandez (Art, Junior)
Mentor: Jennifer Meanley (Art)
In the (Good) Old Days

3rd Place:

Lily McQuillen (Theatre, Junior)
Mentor: Roberto Arce-Martinez (Theatre)
What Are You Doing?

Honorable Mention:

Ashe Smith (Art, Senior) and Amabel Prisk (Theatre, Senior)
Mentors: Leah Sobsey (Art) and Tara Webb (Theatre)
CVPA Pollinator Project: Connecting community and nature through art

Emerging Scholars (UNCG Residential College Students)

1st Place:

Meghan Ciavardone (English, Freshman)
Mentor: Sara Littlejohn (Ashby College)
A Look at How Musical Techniques are Used in Music Therapy and The Effectiveness of Music Therapy

2nd Place:

Aspasia Gardner (Psychology, Sophomore)
Mentor: John Sopper (Grogan College)
How does childhood abuse impact a person's adulthood?

3rd Place:

Megan Wilson (Languages, Literatures, and Cultures, Sophomore)
Mentor: Sara Littlejohn (Ashby College)
The history of female hysteria continues to have detrimental impacts on the perceptions and medical treatments of women today

Honorable Mention:

Christian North (Media Studies, Sophomore)
Mentor: Sara Littlejohn (Ashby College)
How the Punk Movement Came to House so Many White Supremacists

Katelyn Garton (Biology, Sophomore)
Mentor: John Sopper (Grogan College)
Vector-borne disease in a warming climate and what it means for humans

Vishva Patel (Mathematics & Statistics, Junior)
Mentor: Sara Littlejohn (Ashby College)
The Fallout of Non-fungible Tokens (NFTs)



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2023 Thomas Undergraduate Research Mentor Awards

**Tenured track: Dr. Kimberly Petersen,
Department of Chemistry**



Since joining UNCG 12 years ago, she has mentored 35 undergraduates in her research group, which focuses on developing new ways to synthesize molecules. Eight of her students have been published as undergraduates, two received travel awards from the American Chemical Society, and, in just the past five years, 25 have presented their research at conferences, with some even winning awards for those presentations. In 2021, one of her mentees received the prestigious Goldwater Scholarship. “When you mentor undergraduate students, you get to spend a lot of time with them one on one, and you really get to know them and see them grow as a scientist and as a person,” she says. “You can see the change that has happened in their confidence and in their abilities. And it's just really an amazing experience.” Students have gone on from Petersen’s lab to highly ranked graduate programs, medical school, and successful careers with major biotech companies. Two of her students received prestigious NSF graduate fellowships for their graduate studies. “Now at Caltech, I am so grateful to have had a PI that built up my selfconfidence,” shares one of her former mentees.

“There are multiple examples where Dr. Petersen helped me grow past imposter syndrome. She saw potential that I didn’t see in myself.” Petersen says, “I try to make our research group very supportive. Everybody is cheering for everyone else. We really try to build each other up.” Petersen, who identifies connection, inclusion, opportunity, and engagement as essential to teaching and mentoring, is particularly committed to recruiting students from groups historically excluded from her field. “It brings new experiences to the table and new mindsets and new ideas.” As part of her commitment to diversity, equity, and inclusion, she serves as co-PI on two NIH-funded and NSF-funded programs at UNCG that aim to support students from underrepresented groups in science. “Having these opportunities exposes students – who traditionally haven’t been



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2023 Thomas Undergraduate Research Mentor Awards

welcomed into STEM – to something that maybe they didn't know they would be passionate about,” she says. “Then they take it and run with it and go in a million different directions.” Petersen received UNCG’s Alumni Teaching Excellence Award in 2018, as well as her college’s teaching award the previous year, and she has previously held UNCG’s Candice Bernard and Robert Clickman Dean’s Fellowship. One of her prized possessions is a mug gifted to her by her students that reads: You’re not only the best chemistry teacher, but also the best father. “My students tell me that I’m kind of like that awkward dad with the jokes and whatnot.” When asked about her experiences as a mentor, she says, “I’m moved by the stories my students tell me after they leave. I’ve had students get back in touch with me and say, ‘I thought we had something special at UNCG, but when I’ve gone elsewhere, I can really see how special that time was.’”



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2023 Thomas Undergraduate Research Mentor Awards

Pre-tenure track: Dr. Brittany Cassidy, Department of Psychology

Since joining UNCG five years ago, Cassidy has mentored 30 undergraduates in her Social Cognition Lab, which focuses on how people think, interpret, and evaluate each other. “Participating in research as an undergraduate has enormous benefits,” she says. “I know from firsthand experience that being in a lab and doing research as an undergraduate was the most impactful part of being in college for me, and it affected my entire career trajectory. I would not have been able to reach the position that I am today without the mentors that I had.” In Cassidy’s time at UNCG, already her mentees have been part of eight conference talks and presentations, and two students are co-authors on manuscripts currently under review. Her area of interest offers students a wide range of opportunities, many unavailable at other universities. Students gain experience in everything from recruiting participants and running behavioral and neuroscience tests to working with the JSNN’s MRI for functional neuroimaging research. “These are opportunities that don’t happen at every university and a strength of UNCG,” says Cassidy. “Students get to really see what’s going on versus just learning about the methods in the classroom, and that can be really, really eye opening.” She enjoys seeing students moving out of their comfort zones. “It’s really rich for me to see undergraduates succeed and learn and become much more confident in their abilities, whether it’s writing or speaking, or even just becoming more well versed in the literature.” A personal favorite memory, she says, is when a student who had never been out of state or on an airplane traveled with her to San Francisco to present at the national conference of the Society for Personality and Social Psychology. Several of Cassidy’s mentees have entered prestigious graduate programs in areas ranging from industrial organizational psychology to social work, to cognitive neuroscience. Others have entered the workforce in research-related positions.



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and Creativity Office

2023 Thomas Undergraduate Research Mentor Awards

“Even if they don't become social psychologists, you can see them using the skills that they learned to be successful outside of the lab. It brings them confidence, I think when they're looking for careers.” Cassidy says her philosophy is to treat undergraduate researchers like they are on the same level as she is. “It helps undergraduates grow in their confidence to have discussions and take ownership of their research,” she says. “They really drive the research forward, and it helps me really have a holistic view of being a professor. I like that UNCG is a place where your identities as a researcher and as a teacher and mentor are similarly valued. It's a place where I've been able to grow and learn from a diversity of students, as much as I teach them.”



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U-RISE Fellows

UNCG's Undergraduate Research Training Initiative for Student Enhancement (U-RISE) Fellowship program offers talented student underrepresented in the biomedical sciences an opportunity to prepare for graduate school.

UNCG's U-RISE Fellows work in research labs during their junior and senior year and receive:

- A yearly stipend and tuition is paid at the in-state level
- Undergraduate Research Experiences
- Funding to engage in year-round research projects
- Paid summer research experiences
 - In a UNCG faculty mentor's lab
 - With a research group at another institution
- Specialized courses and workshops
- Travel funds to attend scientific conferences
- Opportunities to publish and present their work

Fellow	Faculty Mentor	Department
Daniel Araya	Ayalew Osená	Biology
Makayla Brown	Steve Fordahl	Nutrition
Kyla Grant	"undecided"	Biology
Sarah Hudson	Zhenquan Jia	Biology
Tiana Lillevig	Kimberly Petersen	Biochemistry
Victoria Song	Nadja Cech	Chemistry
Sky Strickland	Kari Eddington	Psychology
Marcos Tapia	Shabnam Hematian	Chemistry



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Undergraduate Research and Creativity Awards (URCA) Summer 2023

Student	Faculty Mentor	Department	Project Title
Lianny Araujo Martinez	Jennifer Coffman	Human Development and Family Studies	The Development of Children's Early Mathematical Skills: The Interplay of Home and School Language Environments
Sebastian Astorga	Alexander Eger	History	Bosnians in Ottoman Palestine
Carly Beck	Maia Popova	Chemistry and Biochemistry	Understanding and Supporting Students' Ability to Make Inferences from Representations of Molecular Structure
Ethan Divon	Aisha Dad-Van Veldhuizen	Classical Studies	Expanding Classics: Comparative World Mythology and its Reception in Gaming
Zoe Edmonson	Maia Popova	Chemistry and Biochemistry	Characterizing Inorganic Chemistry Instructors' Pedagogical Content Knowledge and Teaching Practices when Teaching Symmetry
Samuel Feinstein	Alexander Eger	History	Bosnians in Ottoman Palestine
Brianna Gomez	Eric Josephs	Nanoscience	Analyzing Exogenous dsRNA Uptake to Manipulate Duckweed Biology
Zandra Gregory	Jennifer Etnier	Kinesiology	Fitness, cognition, and APOE genotype in midlife adults at risk of Alzheimer's disease
Emily Guin	Mitchell Croatt	Chemistry and Biochemistry	Regioselectivity Study of meta-Substituted Allyloxybenzenes
Kya Hargan	Sally Koerner	Biology	Investigating changes in bison grazing and insect herbivory preference after long-term grazing exclusion in tallgrass prairie
Matthew Henderson	Alexander Eger	History	Using Faunal Remains to Assess Identity and Environmental Change at Caesarea, Israel



Undergraduate Research and Creativity Awards (URCA) Summer 2023

Student	Faculty Mentor	Department	Project Title
Amber Johnson	Sarah Koerner	Biology	The influence of the legume-rhizobia symbiosis on growth rates of common understory legumes in longleaf pine savanna
Amiah Jones	Mariam Aziza Stephan	School of Art	Murals and Large-Scale Painting: Bridging Creative Research and Community Development
Ashley Jones	Leah Sobsey	School of Art	CVPA Pollinator Garden
Corban Mills	Brittany Cassidy	Psychology	Faces of Racism: Characterizing how Black and White Americans Represent Prejudice
Devyani Patel	Nicholas Oberlies	Chemistry and Biochemistry	Creating Semisynthetic Analogues of Verticillin A and Verticillin D
Noemi Salinas	Gwendolyn Robbins Schug	Biology	Bioarcheology and Subadult Compact Bone Ontogeny—Filling in the holes
Pencie Shrewsbury	Leah Sobsey	School of Art	CVPA Pollinator Garden
Sarah Smith	Mariam Aziza Stephan	School of Art	Murals and Large-Scale Painting: Bridging Creative Research and Community Development
Kathryn Tarr	Jason Reddick	Chemistry and Biochemistry	A Fungi-Free Purification of the Chlorination Enzyme from the Fungal Biosynthesis of Sporidesmin
Milan Toomer	Kimberly Komatsu	Biology	Understanding the role of mutualistic bacteria in driving coexistence among legume plants in mesic grasslands
Eric Whisnant	Ayalew Osen	Biology	Screening of tef (<i>Eragrostis tef</i>) genotypes for enhanced antioxidant properties



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URSCO is a unit within the
University Teaching and Learning Commons



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1310 Walker Ave
Greensboro, NC

For more information about what UNCG's undergraduate scholars are up to, visit the URSCO blog!



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Welcome to the URSCO blog, where UNCG's undergraduate scholars share their work and its impact with the world. This blog aims to highlight the amazing undergraduate research and scholarly activity that takes place on our campus.



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By utlc web site / January 18, 2023

**Gaming Network Bolsters
Community And Sparks
Scholarship**



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By utlc web site / November 30, 2022

**From Bugs to Bats:
Undergrad Explores
Connections in Wetlands**



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By utlc web site / November 21, 2022

**Video: Dr. Asa Eger,
Undergrad Research
Mentor Award Winner**

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